5   **CLAIMS**

We claim:

1.   A computerized method for production management comprising:

     determining a reduced quantity of a requested product quantity in a customer

10   order in reference to the inverse of the probability of profit of the product;

     and

     communicating the reduced quantity to a production management process.

2.   The computerized method of claim 1, wherein the determining further comprises:

15   iteratively determining a graceful reduction of the requested product quantity

     from a time shortfall, from the inverse profit probability, and from a

     reduced number of plurality of products, until the customer accepts the

     reduced quantity or until the time shortfall is non-existent.

20   3.   The computerized method of claim 1, the method further comprising:

     determining that the requested product quantity can not be satisfied within a

     customer target time period.

4.   A computerized method for production management comprising:

25   (a)   determining that at least one request for a plurality of products exceeds a

     production capacity of a vendor, wherein the request for a plurality of

     products includes a quantity associated with each of the plurality of

     products from process and inventory operation data and from customer

     order data; and

30   (b)   determining a quantity of each of the plurality of products corresponding

     to a vendor maximum profit of the requests for a plurality of products,

     from a degradation of the quantity associated with at least one of the

     plurality of products.

35   5.   The computerized method of claim 4, the method further comprising:

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5   (c)   communicating the quantity of each of the plurality of products

corresponding to a maximum vendor profit of the requests for a plurality

of products.

6.   The computerized method of claim 4, wherein the determining (a) further

10   comprises:

        (a)(1)   obtaining process and inventory operation data, the data further

comprising an inventory quantity for each of the plurality of products;

        (a)(2)   obtaining customer order data; the data further comprising an

identification of each of the plurality of products, a requested quantity of

15   each of the plurality of products, and an associated target time of each of

the plurality of requested products;

        (a)(3)   determining an effective quantity for each of the plurality of products to be

produced from the requested quantity of each of the plurality of products

and from the inventory quantity for each of the plurality of products;

20   (a)(4)   determining an actual time to produce all of the plurality of products to be

produced, from the effective quantity for each of the plurality of products

to be produced; and

        (a)(5)   determining that at least one request for a plurality of products exceeds a

production capacity of a vendor, from the effective quantity of the at least

25   one of the plurality of products, from the requested quantity of the at least

one of the plurality of products, and from the target time of the at least one

of the plurality of products.

7.   The computerized method of claim 6, wherein the obtaining (a)(1) action is

30   performed after the obtaining (a)(2) action.

8.   The computerized method of claim 6, wherein the determining (a)(5) further

comprises:

5   (a)(5)(i)   determining that at least one request for a plurality of products exceeds a production capacity of a vendor beyond a predetermined margin.

9.   The computerized method of claim 6, wherein the determining (a)(5) further

10   comprises:

(a)(5)(i)   determining a batch objective value for producing and delivering each of the plurality of products, from the effective quantity of the at least one of the plurality of products, from the requested quantity of the at least one of the plurality of products;

15   (a)(5)(ii)   determining the total production time of the plurality of products from the batch objective value of each of the plurality of products; and

(a)(5)(iii)   comparing the target time to the total production time of the plurality of products.

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10.   The computerized method of claim 6, wherein the predetermined margin further comprises a predetermined absolute quantity margin.

11.   The computerized method of claim 4, wherein determining (b) for each product in

25   the order, further comprises:

(b)(1)   determining a time shortfall in the production of each of the plurality of products from actual time to produce all of the plurality of products to be produced, and from the target time;

(b)(2)   communicating to the customer each of the time shortfalls;

30   (b)(3)   receiving from the customer information representing reduction in the quantity associated with at least one of the plurality of products;

(b)(4)   determining a profit probability from the profit of a production of one of the plurality of products in the customer order, and from the profit of all of the plurality of products in the customer order;

(b)(5) determining a graceful decrement from the time shortfall, from the profit probability, and from a decremented number of plurality of products;

(b)(6) updating the objective value from the graceful decrement;

(b)(7) determining the actual quantity to be produced for each of the plurality of products, from the graceful decrement, and from the unit time of manufacture; and

(b)(8) determining an actual time to produce all of the plurality of products to be produced, from the actual quantity to be produced for each of the plurality of products.

12.   The computerized method of claim 11, wherein determining (b)(4), further comprises:

(b)(4)(i) dividing the profit of a production of one of the plurality of products in the customer order into the profit of all of the plurality of products in the customer order, yielding a portion of total profit attributable to the one product ; and

(b)(4)(ii) determining a profit probability from the portion of total profit attributable to the one product subtracted from (b)(4)(i)

13.   A computerized method for production management comprising:

(a) determining that at least one request for a plurality of products exceeds a production capacity of a vendor, wherein the request for a plurality of products includes a quantity associated with each of the plurality of products from process and inventory operation data

(b) determining an inverse profit probability from the profit of a production of one of the plurality of products in the request, and from the profit of all of the plurality of products in the customer order;

(c) determining a graceful decrement from the time shortfall, from the inverse profit probability, and from a decremented number of plurality of products;

(d) updating the objective value from the graceful decrement;

(e)   determining the actual quantity to be produced for each of the plurality of products, from the graceful decrement ; and

(f)   determining an actual time to produce all of the plurality of products to be produced, from the actual quantity to be produced for each of the plurality of products.

14.   The computerized method of claim 13, wherein the determining (a) further comprises:

(a)(1)   determining that at least one request for a plurality of products exceeds a production capacity of a vendor beyond a predetermined margin, from the effective quantity of the at least one of the plurality of products, from the requested quantity of the at least one of the plurality of products, and from the target time of the at least one of the plurality of products.

15.   The computerized method of claim 14, wherein the determining (a)(1) further comprises:

(a)(1)(i)   determining a batch objective value for producing and delivering each of the plurality of products, from the effective quantity of the at least one of the plurality of products, from the requested quantity of the at least one of the plurality of products;

(a)(1)(ii)   determining the total production time of the plurality of products from the batch objective value of each of the plurality of products; and

(a)(1)(iii)   comparing the target time to the total production time of the plurality of products.

16.   The computerized method of claim 14, wherein the determining (a)(1) further comprises:

(a)(1)(i)   obtaining process and inventory operation data, the data further comprising an inventory quantity for each of the plurality of products;

(a)(1)(ii)   obtaining customer order data; the data further comprising an identification of each of the plurality of products, a requested quantity of each of the plurality of products, and an associated target time of each of the plurality of requested products;

(a)(1)(iii)   determining an effective quantity for each of the plurality of products to be produced from the requested quantity of each of the plurality of products and from the inventory quantity for each of the plurality of products; and

(a)(1)(iv)   determining an actual time to produce all of the plurality of products to be produced, from the effective quantity for each of the plurality of products to be produced.

17.   The computerized method of claim 14, wherein the predetermined margin further comprises an absolute quantity margin.

18.   The computerized method of claim 13, wherein the method further comprises:

(g)   determining a time shortfall in the production of each of the plurality of products from actual time to produce all of the plurality of products to be produced, and from the target time;

(h)   communicating to the customer each of the time shortfalls; and

(i)   receiving from the customer information representing a reduction in the quantity associated with at least one of the plurality of products.

19.   A computer-readable medium having computer-executable instructions to cause a computer to perform a method for production management comprising:

determining a reduced quantity of a requested product quantity in a customer order in reference to the inverse of the probability of profit of the product; and

communicating the reduced quantity to a production management process.

5   20.   The computer-readable medium of claim 19, wherein the determining further
comprises:

    iteratively determining a graceful reduction of the requested product quantity
        from a time shortfall, from the inverse profit probability, and from a
        reduced number of plurality of products, until the customer accepts the
10   reduced quantity or until the time shortfall is non-existent.

    21.   The computer-readable medium of claim 19, the method further comprising:
        determining that the requested product quantity can not be satisfied within a
        customer target time period.

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22.   A computer-readable medium having computer-executable instructions to cause a
computer to perform a method for production management comprising:

    (a)   determining that at least one request for a plurality of products exceeds a
        production capacity of a vendor, wherein the request for a plurality of
20   products includes a quantity associated with each of the plurality of
        products from process and inventory operation data and from customer
        order data; and

    (b)   determining a quantity of each of the plurality of products corresponding
        to a vendor maximum profit of the requests for a plurality of products,
25   from a degradation of the quantity associated with at least one of the
        plurality of products.

    23.   The computer-readable medium of claim 22, the method further comprising:

    (c)   communicating the quantity of each of the plurality of products
30   corresponding to a maximum vendor profit of the requests for a plurality
        of products.

    24.   The computer-readable medium of claim 22, wherein the determining (a) further
comprises:

(a)(1) obtaining process and inventory operation data, the data further comprising an inventory quantity for each of the plurality of products;

(a)(2) obtaining customer order data; the data further comprising an identification of each of the plurality of products, a requested quantity of each of the plurality of products, and an associated target time of each of the plurality of requested products;

(a)(3) determining an effective quantity for each of the plurality of products to be produced from the requested quantity of each of the plurality of products and from the inventory quantity for each of the plurality of products;

(a)(4) determining an actual time to produce all of the plurality of products to be produced, from the effective quantity for each of the plurality of products to be produced; and

(a)(5) determining that at least one request for a plurality of products exceeds a production capacity of a vendor, from the effective quantity of the at least one of the plurality of products, from the requested quantity of the at least one of the plurality of products, and from the target time of the at least one of the plurality of products.

25. The computer-readable medium of claim 24, wherein the obtaining (a)(1) action is performed after the obtaining (a)(2) action.

26. The computer-readable medium of claim 24, wherein the determining (a)(5) further comprises:

(a)(5)(i) determining that at least one request for a plurality of products exceeds a production capacity of a vendor beyond a predetermined margin.

27. The computer-readable medium of claim 24, wherein the determining (a)(5) further comprises:

(a)(5)(i) determining a batch objective value for producing and delivering each of the plurality of products, from the effective quantity of the

5 at least one of the plurality of products, from the requested quantity of the at least one of the plurality of products;

(a)(5)(ii) determining the total production time of the plurality of products from the batch objective value of each of the plurality of products; and

10 (a)(5)(iii) comparing the target time to the total actual production time of the plurality of products.

28. The computer-readable medium of claim 24, wherein the predetermined margin further comprises a predetermined absolute quantity margin.

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29. The computer-readable medium of claim 22, wherein determining (b) for each product in the order, further comprises:

(b)(1) determining a time shortfall in the production of each of the plurality of products from actual time to produce all of the plurality of products to be

20 produced, and from the target time;

(b)(2) communicating to the customer each of the time shortfalls;

(b)(3) receiving from the customer information representing reduction in the quantity associated with at least one of the plurality of products;

(b)(4) determining a profit probability from the profit of a production of one of

25 the plurality of products in the customer order, and from the profit of all of the plurality of products in the customer order;

(b)(5) determining a graceful decrement from the time shortfall, from the profit probability, and from a decremented number of plurality of products;

(b)(6) updating the objective value from the graceful decrement;

30 (b)(7) determining the actual quantity to be produced for each of the plurality of products, from the graceful decrement; and

(b)(8) determining an actual time to produce all of the plurality of products to be produced, from the actual quantity to be produced for each of the plurality of products.

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5   30.   The computer-readable medium of claim 29, wherein determining (b)(4), further

comprises:

(b)(4)(i)   dividing the profit of a production of one of the plurality of products in

the customer order into the profit of all of the plurality of products in

the customer order, yielding a portion of total profit attributable to that

10   one product ; and

(b)(4)(ii)   determining a profit probability from the portion of total profit

attributable to the one product subtracted from (b)(4)(i)

31.   / A computer-readable medium having computer-executable instructions to cause a

15   computer to perform a method for production management comprising:

(a)   determining that at least one request for a plurality of products exceeds a

production capacity of a vendor, wherein the request for a plurality of

products includes a quantity associated with each of the plurality of

products from process and inventory operation data

20   (b)   determining a profit probability from the profit of a production of one of

the plurality of products in the request, and from the profit of all of the

plurality of products in the customer order;

(c)   determining a graceful decrement from the time shortfall, from the profit

probability, and from a decremented number of plurality of products;

25   (d)   updating the objective value from the graceful decrement;

(e)   determining the actual quantity to be produced for each of the plurality of

products, from the graceful decrement; and

(f)   determining an actual time to produce all of the plurality of products to be

produced, from the actual quantity to be produced for each of the plurality

30   of products.

32.   The computer-readable medium of claim 31, wherein the determining (a) further

comprises:

(a)(1)   determining that at least one request for a plurality of products exceeds a

35   production capacity of a vendor beyond a predetermined margin, from the

5   effective quantity of the at least one of the plurality of products, from the requested quantity of the at least one of the plurality of products, and from the target time of the at least one of the plurality of products.

33.   The computer-readable medium of claim 32, wherein the determining (a)(1)

10   further comprises:

(a)(1)(i)   determining a batch objective value for producing and delivering each of the plurality of products, from the effective quantity of the at least one of the plurality of products, from the requested quantity of the at least one of the plurality of products;

15   (a)(1)(ii)   determining the total production time of the plurality of products from the batch objective value of each of the plurality of products; and

(a)(1)(iii)   comparing the target time to the total production time of the plurality of products.

20

34.   The computer-readable medium of claim 32, wherein the determining (a)(1) further comprises:

(a)(1)(i)   obtaining process and inventory operation data, the data further comprising an inventory quantity for each of the plurality of products;

25   (a)(1)(ii)   obtaining customer order data; the data further comprising an identification of each of the plurality of products, a requested quantity of each of the plurality of products, and an associated target time of each of the plurality of requested products;

(a)(1)(iii)   determining an effective quantity for each of the plurality of products

30   to be produced from the requested quantity of each of the plurality of products and from the inventory quantity for each of the plurality of products; and

(a)(1)(iv)   determining an actual time to produce all of the plurality of products to be produced, from the effective quantity for each of the plurality of

35   products to be produced.

5

35.   The computer-readable medium of claim 32, wherein the predetermined margin further comprises an absolute quantity margin.

36.   The computer-readable medium of claim 31, wherein the method further

10   comprises:

(g)   determining a time shortfall in the production of each of the plurality of products from actual time to produce all of the plurality of products to be produced, and from the target time;

(h)   communicating to the customer each of the time shortfalls; and

15   (i)   receiving from the customer information representing a reduction in the quantity associated with at least one of the plurality of products.

37. $\diagup$ A computer data signal embodied in a carrier wave and representing a sequence of instructions which, when executed by a processor, cause the processor to perform the

20   method of:

(a)   determining that at least one request for a plurality of products exceeds a production capacity of a vendor, wherein the request for a plurality of products includes a quantity associated with each of the plurality of products from process and inventory operation data;

25   (b)   determining an inverse profit probability from the profit of a production of one of the plurality of products in the request, and from the profit of all of the plurality of products in the customer order;

(c)   determining a graceful decrement from the time shortfall, from the inverse profit probability, and from a decremented number of plurality of

30   products;

(d)   updating the objective value from the graceful decrement;

(e)   determining the actual quantity to be produced for each of the plurality of products, from the graceful decrement, and from the unit time of manufacture; and

5   (f)   determining an actual time to produce all of the plurality of products to be produced, from the actual quantity to be produced for each of the plurality of products.

38.   The computer data signal of claim 37, wherein the determining (a) further

10   comprises:

       (a)(1)   determining that at least one request for a plurality of products exceeds a production capacity of a vendor beyond a predetermined margin, from the effective quantity of the at least one of the plurality of products, from the requested quantity of the at least one of the plurality of products, and from

15   the target time of the at least one of the plurality of products.

39. /   A computer-readable medium having stored thereon an data structure representing a reduced quantity of a requested product quantity produced by a method comprising:

       determining that the quantity of the requested product can not be satisfied by a

20   vendor within a customer target time period; and

       iteratively determining a graceful reduction of the requested product quantity from a time shortfall, from the inverse profit probability, and from a reduced number of plurality of products, until the customer accepts the reduced quantity or until the time shortfall is non-existent.

25

40.   The computer-readable medium of claim 39, produced by the method further comprising:

       communicating the reduced quantity to a vendor production process.

30   41.   The computer-readable medium of claim 39, wherein the determining further comprises:

       determining that at least one request for a plurality of products exceeds a production capacity of the vendor beyond a predetermined margin.

5   42.   The computer-readable medium of claim 39, wherein the determining further

comprises:

determining a time shortfall in the production of each of the plurality of products

from actual time to produce all of the plurality of products to be produced,

and from the target time;

10   communicating to the customer each of the time shortfalls;

receiving from the customer information representing reduction in the quantity

associated with at least one of the plurality of products;

determining a profit probability from the profit of a production of one of the

plurality of products in the customer order, and from the profit of all of the

15   plurality of products in the customer order;

determining a graceful decrement from the time shortfall, from the profit

probability, and from a decremented number of plurality of products;

updating the objective value from the graceful decrement;

determining the actual quantity to be produced for each of the plurality of

20   products, from the graceful decrement, and from the unit time of

manufacture; and

determining an actual time to produce all of the plurality of products to be

produced, from the actual quantity to be produced for each of the plurality

of products.

25

43.   ╱ A computer-readable medium having stored thereon an data structure representing

a reduced quantity of a requested product quantity produced by a method comprising:

(a)   determining that at least one request for a plurality of products exceeds a

production capacity of a vendor, wherein the request for a plurality of

30   products includes a quantity associated with each of the plurality of

products from process and inventory operation data

(b)   determining a profit probability from the profit of a production of one of

the plurality of products in the request, and from the profit of all of the

plurality of products in the customer order;

5   (c) determining a reduced quantity from the time shortfall, from the profit

      probability, and from a decremented number of plurality of products;

   (d) updating the objective value from the reduced quantity;

   (e) determining the actual quantity to be produced for each of the plurality of

      products, from the reduced quantity, and from the unit time of

10   manufacture; and

   (f) determining an actual time to produce all of the plurality of products to be

      produced, from the actual quantity to be produced for each of the plurality

      of products.

15 44. The computer-readable medium of claim 43, wherein the determining (a) further

comprises:

   (a)(1) determining that at least one request for a plurality of products exceeds a

      production capacity of a vendor beyond a predetermined margin, from the

      effective quantity of the at least one of the plurality of products, from the

20   requested quantity of the at least one of the plurality of products, and from

      the target time of the at least one of the plurality of products.

  45. The computer-readable medium of claim 43, wherein the method further

comprises:

25   (g) determining a time shortfall in the production of each of the plurality of

      products from actual time to produce all of the plurality of products to be

      produced, and from the target time;

   (h) communicating to the customer each of the time shortfalls; and

   (i) receiving from the customer information representing reduction in the

30   quantity associated with at least one of the plurality of products.

  46. A system for transacting in electronic commerce comprising:

   a processor; and

5   software means operative on the processor for degrading the quantity of an order

of a plurality of products using an inverse probability of profit function in

reference to profits from each of the products in the order.

47. / A computerized apparatus for production management comprising:

10   a demand analyzer, that determines if a vendor can satisfy a quantity of customer

demand for a product, from a database of process and inventory operation

data and from a database of customer order data; and

a graceful quantity degrader, operably coupled to the demand analyzer, that yields

a degraded quantity from the quantity of customer demand using an

15   inverse probability of profit function.

48.   The computerized apparatus of claim 47, wherein the graceful quantity degrader

yields the degraded quantity for each of the products that the customer indicated a

reduced quantity thereof, from a time shortfall, the inverse probability of profit, and from

20   a decremented number of plurality of products of the customer order.

49. / A computerized apparatus for production management comprising:

an excess quantity determiner, that determines that one or more customer requests

for a plurality of products, exceed a production capacity of the vendor

25   within a prescribed time period; and

a reduced quantity determiner, operably coupled to the excess quantity

determiner, that yields a reduced quantity, from an inverse probability of

profit of the reduced quantity.

30   50.   The computerized apparatus of claim 49, wherein the excess quantity determiner

further comprises:

a determiner of batch objective values, from an effective quantity of at least one

product identified in the request, and from the corresponding production

speed of each of a plurality of product batches in the request;

5   a determiner of actual total production time of the at least one products in the

request, from the sum of the batch objective values; and

a determiner of a production time shortfall, from the actual total production time,

and a target production time, wherein the production shortfall indicates an

excess quantity.

10

51.   The computerized apparatus of claim 49, wherein the reduced quantity determiner

further comprises:

an inverse profit probability determiner, wherein the inverse profit probability is

determined from a projected profit of a product in a customer order, and

15   from the profit of the entire customer order;

a gracefully-decremented quantity determiner, operably coupled to the inverse

profit probability determiner, wherein the gracefully-decremented quantity

is determined for each of the products that the customer indicated a

reduced quantity, and determined from a time shortfall, the inverse profit

20   probability, and from a decremented number of plurality of products;

an objective-value determiner, operably coupled to the gracefully-decremented

quantity determiner, wherein the objective-value is determined for each

product in the customer order from the gracefully-decremented quantity,

and from the previous objective value;

25   an actual-quantity determiner, operably coupled to the objective-value determiner,

wherein the actual-quantity is determined from the objective-value, a

production speed of the product, and from the inventory quantity of the

product; and

a total-production-time determiner, operably coupled to the actual-quantity

30   determiner, wherein the total-production-time is determined as the sum of

objective value of each product.

52. , A computerized apparatus for production management comprising:

5   an excess quantity determiner, that determines that one or more customer requests for a plurality of products exceed a production capacity of the vendor within a prescribed time period;

a reduced quantity determiner, operably coupled to the excess quantity determiner, that yields a reduced quantity, from an inverse probability of 10   profit of the reduced quantity, wherein the reduced quantity determiner further comprises:

a gracefully-decremented quantity determiner, yielding a reduced quantity, operably coupled to the inverse profit probability determiner, wherein the gracefully-decremented quantity is 15   determined for each of the products that the customer indicated a reduced quantity, and determined from a time shortfall, the inverse probability of profit, and from a decremented number of plurality of products.

20   53.   The computerized apparatus of claim 52, wherein the inverse profit probability is determined from a projected profit of a product in the customer request, and from the profit of the entire customer request.

54.✓   A computer-readable medium comprising:

25   a demand analyzer, that determines if a vendor can satisfy a quantity of customer demand for a product, from a database of process and inventory operation data and from a database of customer order data; and

a graceful quantity degrader, operably coupled to the demand analyzer, that yields a degraded quantity from the quantity of customer demand using an 30   inverse probability of profit function

55.   The computer-readable medium of claim 54, wherein the graceful quantity degrader yields the degraded quantity for each of the products that the customer indicated a reduced quantity thereof, from a time shortfall, the inverse probability of profit, and 35 from a decremented number of plurality of products of the customer order.

5

56.   A computer-readable medium comprising:

an excess quantity determiner, that determines that one or more customer requests

for a plurality of products, exceed a production capacity of the vendor

within a prescribed time period; and

10   a reduced quantity determiner, operably coupled to the excess quantity

determiner, that yields a reduced quantity, from an inverse probability of

profit of the reduced quantity.

57.   The computer-readable medium of claim 56, wherein the excess quantity

15   determiner further comprises:

a determiner of batch objective values, from an effective quantity of at least one

product identified in the request, and from the corresponding production

speed of each of a plurality of product batches in the request;

a determiner of actual total production time of the at least one products in the

20   request, from the sum of the batch objective values; and

a determiner of a production time shortfall, from the actual total production time,

and a target production time, wherein the production shortfall indicates an

excess quantity.

25   58.   The computer-readable medium of claim 56, wherein the reduced quantity

determiner further comprises:

an inverse profit probability determiner, wherein the inverse profit probability is

determined from a projected profit of a product in a customer order, and

from the profit of the entire customer order;

30   a gracefully-decremented quantity determiner, operably coupled to the inverse

profit probability determiner, wherein the gracefully-decremented quantity

is determined for each of the products that the customer indicated a

reduced quantity, and determined from a time shortfall, the inverse profit

probability, and from a decremented number of plurality of products;

5   an objective-value determiner, operably coupled to the gracefully-decremented

quantity determiner, wherein the objective-value is determined for each

product in the customer order from the gracefully-decremented quantity,

and from the previous objective value;

an actual-quantity determiner, operably coupled to the objective-value determiner,

10   wherein the actual-quantity is determined from the objective-value, a

production speed of the product, and from the inventory quantity of the

product; and

a total-production-time determiner, operably coupled to the actual-quantity

determiner, wherein the total-production-time is determined as the sum of

15   objective value of each product.

59. ⁄   A computer-readable medium comprising:

an excess quantity determiner, that determines that one or more customer requests

for a plurality of products exceed a production capacity of the vendor

20   within a prescribed time period;

a reduced quantity determiner, operably coupled to the excess quantity

determiner, that yields a reduced quantity, from an inverse probability of

profit of the reduced quantity, wherein the reduced quantity determiner

further comprises:

25   a gracefully-decremented quantity determiner, yielding a reduced

quantity, operably coupled to the inverse profit probability

determiner, wherein the gracefully-decremented quantity is

determined for each of the products that the customer

indicated a reduced quantity, and determined from a time

30   shortfall, the inverse probability of profit, and from a

decremented number of plurality of products.

60.   The computer-readable medium of claim 59, wherein the inverse profit

probability is determined from a projected profit of a product in the customer request, and

35   from the profit of the entire customer request.